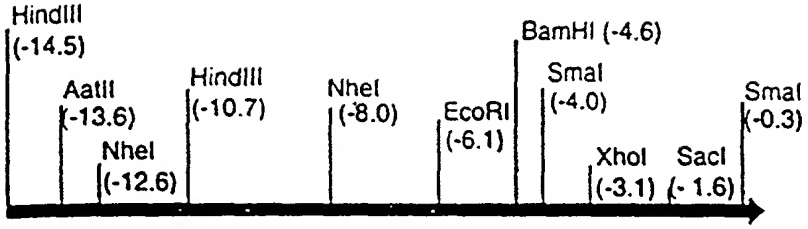
Figure 1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-14403 TACTCAGCCC CAGAAGTGAA GGGTGAAGCT GGGTGGAGCC AAACCAGGCA AGCCTACC

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-14283 AGGTACAAAC ACCAGATCCA ACCATGGTCT GGGGGGACAG CTGTCAAATG CCTAAAAA

-14223 TACCTGGGAG AGGAGCAGGC AAACTATCAC TGCCCCAGGT TCTCTGAACA GAAACAGA

-14163 GGCAACCCAA AGTCCAAATC CAGGTGAGCA GGTGCACCAA ATGCCCAGAG ATATGACG

-14103 GCAAGAAGTG AAGGAACCAC CCCTGCATCA AATGTTTTGC ATGGGAAGGA GAAGGGGG

-14043 GCTCATGTTC CCAATCCAGG AGAATGCATT TGGGATCTGC CTTCTTCTCA CTCCTTGG

-13983 AGCAAGACTA AGCAACCAGG ACTCTGGATT TGGGGAAAGA CGTTTATTTG TGGAGGCC

-13923 TGATGACAAT CCCACGAGGG CCTAGGTGAA GAGGGCAGGA AGGCTCGAGA CACTGGGG

-13863 TGAGTGAAAA CCACACCCAT GATCTGCACC ACCCATGGAT GCTCCTTCAT TGCTCACC

-13803 TCTGTTGATA TCAGATGGCC CCATTTTCTG TACCTTCACA GAAGGACACA GGCTAGGG

-13743 TGTGCATGGC CTTCATCCCC GGGGCCATGT GAGGACAGCA GGTGGGAAAG ATCATGGG

-13683 CTCCTGGGTC CTGCAGGGCC AGAACATTCA TCACCCATAC TGACCTCCTA GATGGGAA

-13623 GCTTCCCTGG GGCTGGGCCA ACGGGGCCTG GGCAGGGGAG AAAGGACGTC AGGGGACA

-13563 GAGGAAGGGT CATCGAGACC CAGCCTGGAA GGTTCTTGTC TCTGACCATC CAGGATTT

-13503 TTCCCTGCAT CTACCTTTGG TCATTTTCCC TCAGCAATGA CCAGCTCTGC TTCCTGAT

-13443 CAGCCTCCCA CCCTGGACAC AGCACCCCAG TCCCTGGCCC GGCTGCATCC ACCCAATA

-13383 CTGATAACCC AGGACCCATT ACTTCTAGGG TAAGGAGGGT CCAGGAGACA GAAGCTGA

-13323 AAAGGTCTGA AGAAGTCACA TCTGTCCTGG CCAGAGGGGA AAAACCATCA GATGCTGA

-13263 CAGGAGAATG TTGACCCAGG AAAGGGACCG AGGACCCAAG AAAGGAGTCA GACCACCA

-13203 GTTTGCCTGA GAGGAAGGAT CAAGGCCCCG AGGGAAAGCA GGGCTGGCTG CATGTGCA

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Figure 2 (1 of 11)

-13143 ACACTGGTGG GGCATATGTG TCTTAGATTC TCCCTGAATT CAGTGTCCCT GCCATGGC

-13083 GACTCTCTAC TCAGGCCTGG ACATGCTGAA ATAGGACAAT GGCCTTGTCC TCTCTCCC

-13023 CCATTTGGCA AGAGACATAA AGGACATTCC AGGACATGCC TTCCTGGGAG GTCCAGGT

-12963 TCTGTCTCAC ACCTCAGGGA CTGTAGTTAC TGCATCAGCC ATGGTAGGTG CTGATCTC

-12903 CCAGCCTGTC CAGGCCCTTC CACTCTCCAC TTTGTGACCA TGTCCAGGAC CACCCCTC

-12843 ATCCTGAGCC TGCAAATACC CCCTTGCTGG GTGGGTGGAT TCAGTAAACA GTGAGCTC

-12783 ATCCAGCCCC CAGAGCCACC TCTGTCACCT TCCTGCTGGG CATCATCCCA CCTTCACA

-12723 CACTAAAGAG CATGGGGAGA CCTGGCTAGC TGGGTTTCTG CATCACAAAG AAAATAAT

-12663 CCCAGGTTCG GATTCCCAGG GCTCTGTATG TGGAGCTGAC AGACCTGAGG CCAGGAGA

-12603 GCAGAGGTCA GCCCTAGGGA GGGTGGGTCA TCCACCCAGG GGACAGGGGT GCACCAGC

-12543 TGCTACTGAA AGGGCCTCCC CAGGACAGCG CCATCAGCCC TGCCTGAGAG CTTTGCTA

-12483 CAGCAGTCAG AGGAGGCCAT GGCAGTGGCT GAGCTCCTGC TCCAGGCCCC AACAGACC

-12423 ACCAACAGCA CAATGCAGTC CTTCCCCAAC GTCACAGGTC ACCAAAGGGA AACTGAGG

-12363 CTACCTAACC TTAGAGCCAT CAGGGGAGAT AACAGCCCAA TTTCCCAAAC AGGCCAGT

-12303 CAATCCCATG ACAATGACCT CTCTGCTCTC ATTCTTCCCA AAATAGGACG CTGATTCT

-12243 CCCACCATGG ATTTCTCCCT TGTCCCGGGA GCCTTTTCTG CCCCCTATGA TCTGGGCA

-12183 CCTGACACAC ACCTCCTCTC TGGTGACATA TCAGGGTCCC TCACTGTCAA GCAGTCCA

-12123 AAGGACAGAA CCTTGGACAG CGCCCATCTC AGCTTCACCC TTCCTCCTTC ACAGGGTT

-12063 GGGCAAAGAA TAAATGGCAG AGGCCAGTGA GCCCAGAGAT GGTGACAGGC AGTGACCC

-12003 GGGCAGATGC CTGGAGCAGG AGCTGGCGGG GCCACAGGGA GAAGGTGATG CAGGAAGG

-11943 AACCCAGAAA TGGGCAGGAA AGGAGGACAC AGGCTCTGTG GGGCTGCAGC CCAGGGTT

-11883 ACTATGAGTG TGAAGCCATC TCAGCAAGTA AGGCCAGGTC CCATGAACAA GAGTGGGA

-11823 ACGTGGCTTC CTGCTCTGTA TATGGGGTGG GGGATTCCAT GCCCCATAGA ACCAGATG

Figure 2 (2 of 11)

-11763 CGGGGTTCAG ATGGAGAAGG AGCAGGACAG GGGATCCCCA GGATAGGAGG ACCCCAGT

-11703 CCCCACCCAG GCAGGTGACT GATGAATGGG CATGCAGGGT CCTCCTGGGC TGGGCTCT

-11643 CTTTGTCCCT CAGGATTCCT TGAAGGAACA TCCGGAAGCC GACCACATCT ACCTGGTG

-11583 TTCTGGGGAG TCCATGTAAA GCCAGGAGCT TGTGTTGCTA GGAGGGGTCA TGGCATGT

-11523 TGGGGGCACC AAAGAGAGAA ACCTGAGGGC AGGCAGGACC TGGTCTGAGG AGGCATGG

-11463 GCCCAGATGG GGAGATGGAT GTCAGGAAAG GCTGCCCCAT CAGGGAGGGT GATAGCAA

-11403 GGGGGTCTGT GGGAGTGGGC ACGTGGGATT CCCTGGGCTC TGCCAAGTTC CCTCCCAT

-11343 TCACAACCTG GGGACACTGC CCATGAAGGG GCGCCTTTGC CCAGCCAGAT GCTGCTGG

-11283 CTGCCCATCC ACTACCCTCT CTGCTCCAGC CACTCTGGGT CTTTCTCCAG ATGCCCTG

-11223 CAGCCCTGGC CTGGGCCTGT CCCCTGAGAG GTGTTGGGAG AAGCTGAGTC TCTGGGGA

-11163 CTCTCATCAG AGTCTGAAAG GCACATCAGG AAACATCCCT GGTCTCCAGG ACTAGGCA

-11103 GAGGAAAGGG CCCCAGCTCC.TCCCTTTGCC ACTGAGAGGG TCGACCCTGG GTGGCCAC

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-10983 GCAGGTACAA TACATGTGGG GACAGTCTGT ACCCAGGGGA AGCCAGTTCT CTCTTCCT

-10923 GAGACCGGGC CTCAGGGCTG TGCCCGGGGC AGGCGGGGGC AGCACGTGCC TGTCCTTG

-10863 AACTCGGGAC CTTAAGGGTC TCTGCTCTGT GAGGCACAGC AAGGATCCTT CTGTCCAG

-10803 ATGAAAGCAG CTCCTGCCCC TCCTCTGACC TCTTCCTCCT TCCCAAATCT CAACCAAC

-10743 ATAGGTGTTT CAAATCTCAT CATCAAATCT TCATCCATCC ACATGAGAAA GCTTAAAA

-10683 CAATGGATTG ACAACATCAA GAGTTGGAAC AAGTGGACAT GGAGATGTTA CTTGTGGA

-10623 TTTAGATGTG TTCAGCTATC GGGCAGGAGA ATCTGTGTCA AATTCCAGCA TGGTTCAG

-10563 GAATCAAAAA GTGTCACAGT CCAAATGTGC AACAGTGCAG GGGATAAAAC TGTGGTGC

-10503 TCAAACTGAG GGATATTTTG GAACATGAGA AAGGAAGGGA TTGCTGCTGC ACAGAACA

-10443 GATGATCTCA CACATAGAGT TGAAAGAAAG GAGTCAATCG CAGAATAGAA AATGATCA

Figure 2 (3 of 11)

-10383 AATTCCACCT CTATAAAGTT TCCAAGAGGA AAACCCAATT CTGCTGCTAG AGATCAGA

-10323 GGAGGTGACC TGTGCCTTGC AATGGCTGTG AGGGTCACGG GAGTGTCACT TAGTGCAG

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-10203 TGCTGTGTTC ATTTTACTTC ACCGGAAAAG AAGAATAAAA TCAGCCGGGC GCGGTGGC

-10143 ACGCCTGTAA TCCCAGCACT TTAGAAGGCT GAGGTGGGCA GATTACTTGA GGTCAGGA

-10083 TCAAGACCAC CCTGGCCAAT ATGGTGAAAC CCCGGCTCTA CTAAAAATAC AAAAATTA

-10023 TGGGCATGGT GGTGCGCGCC TGTAATCCCA GCTACTCGGG AGGCTGAGGC TGGACAAT

-9963 CTTGGACCCA GGAAGCAGAG GTTGCAGTGA GCCAAGATTG TGCCACTGCA CTCCAGCT

-9903 GGCAACAGAG CCAGACTCTG TAAAAAAAAA AAAAAAAAAA AAAAAAAGAA AGAAAGAA

-9843 AGAAAAGAAA GTATAAAATC TCTTTGGGTT AACAAAAAAA GATCCACAAA ACAAACAC

-9783 GCTCTTATCA AACTTACACA ACTCTGCCAG AGAACAGGAA ACACAAATAC TCATTAAC

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-9603 AGCTAAGATT TACTGCATTG AGTTCATTCC CCAGGTATGC AAGGTGATTT TAACACCT

-9543 AAATCAATCA TTGCCTTTAC TACATAGACA GATTAGCTAG AAAAAAATTA CAACTAGC

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-9303 AAGGCTGCCT GCGATGGCCA CACAGGCTCC AACCCGTGGG CCTCAACCTC CCGCAGAG

-9243 TCTCCTTTGG CCACCCCATG GGGAGAGCAT GAGGACAGGG CAGAGCCCTC TGATGCCC

-9183 ACATGGCAGG AGCTGACGCC AGAGCCATGG GGGCTGGAGA GCAGAGCTGC TGGGGTCA

-9123 GCTTCCTGAG GACACCCAGG CCTAAGGGAA GGCAGCTCCC TGGATGGGGG CAACCAGG

-9063 CCGGGCTCCA ACCTCAGAGC CCGCATGGGA GGAGCCAGCA CTCTAGGCCT TTCCTAGG

Figure 2 (4 of 11)

-9003 GACTCTGAGG GGACCCTGAC ACGACAGGAT CGCTGAATGC ACCCGAGATG AAGGGGCC

-8943 CACGGGACCC TGCTCTCGTG GCAGATCAGG AGAGAGTGGG ACACCATGCC AGGCCCCC

-8883 GGCATGGCTG CGACTGACCC AGGCCACTCC CCTGCATGCA TCAGCCTCGG TAAGTCAC

-8823 GACCAAGCCC AGGACCAATG TGGAAGGAAG GAAACAGCAT CCCCTTTAGT GATGGAAC

-8763 AAGGTCAGTG CAAAGAGAGG CCATGAGCAG TTAGGAAGGG TGGTCCAACC TACAGCAC

-8703 ACCATCATCT ATCATAAGTA GAAGCCCTGC TCCATGACCC CTGCATTTAA ATAAACGT

-8643 GTTAAATGAG TCAAATTCCC TCACCATGAG AGCTCACCTG TGTGTAGGCC CATCACAC

-8583 ACAAACACAC ACACACACAC ACACACACAC ACACACACAC ACAGGGAAAG TGCAGGAT

-8523 TGGACAGCAC CAGGCAGGCT TCACAGGCAG AGCAAACAGC GTGAATGACC CATGCAGT

-8463 CCTGGGCCCC ATCAGCTCAG AGACCCTGTG AGGGCTGAGA TGGGGCTAGG CAGGGGAG

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-8343 GGAGGGGGCT GCAGGGAGCT GGGTACTGCC CTCCAGGGAG GGGGCTGCAG GGAGCTGG

-8283 ACTGCCCTCC AGGGAGGGGG CTGCAGGGAG CTGGGTACTG CCCTCCAGGG AGGGGGCT

-8223 AGGGAGCTGG GTACTGCCCT CCAGGGAGGC AGGAGCACTG TTCCCAACAG AGAGCACA

-8163 TTCCTGCAGC AGCTGCACAG ACACAGGAGC CCCCATGACT GCCCTGGGCC AGGGTGTG

-8103 TTCCAAATTT CGTGCCCCAT TGGGTGGGAC GGAGGTTGAC CGTGACATCC AAGGGGCA

-8043 TGTGATTCCA AACTTAAACT ACTGTGCCTA CAAAATAGGA AATAACCCTA CTTTTTCT

-7983 TATCTCAAAT TCCCTAAGCA CAAGCTAGCA CCCTTTAAAT CAGGAAGTTC AGTCACTC

-7923 GGGGTCCTCC CATGCCCCCA GTCTGACTTG CAGGTGCACA GGGTGGCTGA CATCTGTC

-7863 TGCTCCTCCT CTTGGCTCAA CTGCCGCCCC TCCTGGGGGT GACTGATGGT CAGGACAA

-7803 GATCCTAGAG CTGGCCCCAT GATTGACAGG AAGGCAGGAC TTGGCCTCCA TTCTGAAG

-7743 TAGGGGTGTC AAGAGAGCTG GGCATCCCAC AGAGCTGCAC AAGATGACGC GGACAGAG

-7683 TGACACAGGG CTCAGGGCTT CAGACGGGTC GGGAGGCTCA GCTGAGAGTT CAGGGACA

Figure 2 (5 of 11)

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-7203 CACATCCCTC CTGATTCTTT CAGCTGAGGG CCCTTCTTGA AATCCCAGGG AGGACTCA

-7143 CCCCACTGGG AAAGGCCCAG TGTGGACGGT TCCACAGCAG CCCAGCTAAG GCCCTTGG

-7083 ACAGATCCTG AGTGAGAGAA CCTTTAGGGA CACAGGTGCA CGGCCATGTC CCCAGTGC

-7023 ACACAGAGCA GGGGCATCTG GACCCTGAGT GTGTAGCTCC CGCGACTGAA CCCAGCCC

-6963 CCCCAATGAC GTGACCCCTG GGGTGGCTCC AGGTCTCCAG TCCATGCCAC CAAAATCT

-6903 AGATTGAGGG TCCTCCCTTG AGTCCCTGAT GCCTGTCCAG GAGCTGCCCC CTGAGCAA

-6843 CTAGAGTGCA GAGGGCTGGG ATTGTGGCAG TAAAAGCAGC CACATTTGTC TCAGGAAG

-6783 AAGGGAGGAC ATGAGCTCCA GGAAGGGCGA TGGCGTCCTC TAGTGGGCGC CTCCTGTT

-6723 TGAGCAAAAA GGGGCCAGGA GAGTTGAGAG ATCAGGGCTG GCCTTGGACT AAGGCTCA

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-6603 GGAGCAGGTA AGGGGAAGCC CCAGGGAGGC CGGGGGAGGG TACAGCAGAG CTCTCCAC

-6543 CTCAGCATTG ACATTTGGGG TGGTCGTGCT AGTGGGGTTC TGTAAGTTGT AGGGTGTT

-6483 GCACCATCTG GGGACTCTAC CCACTAAATG CCAGCAGGAC TCCCTCCCCA AGCTCTAA

-6423 ACCAACAATG TCTCCAGACT TTCCAAATGT CCCCTGGAGA GCAAAATTGC TTCTGGCA

-6363 ATCACTGATC TACGTCAGTC TCTAAAAGTG ACTCATCAGC GAAATCCTTC ACCTCTTG

-6303 AGAAGAATCA CAAGTGTGAG AGGGGTAGAA ACTGCAGACT TCAAAATCTT TCCAAAAG

Figure 2 (6 of 11)

-6243 TTTTACTTAA TCAGCAGTTT GATGTCCCAG GAGAAGATAC ATTTAGAGTG TTTAGAGT

-6183 ATGCCACATG GCTGCCTGTA CCTCACAGCA GGAGCAGAGT GGGTTTTCCA AGGGCCTG

-6123 ACCACAACTG GAATGACACT CACTGGGTTA CATTACAAAG TGGAATGTGG GGAATTCT

-6063 AGACTTTGGG AAGGGAAATG TATGACGTGA GCCCACAGCC TAAGGCAGTG GACAGTCC

-6003 TTTGAGGCTC TCACCATCTA GGAGACATCT CAGCCATGAA CATAGCCACA TCTGTCAT

-5943 GAAAACATGT TTTATTAAGA GGAAAAATCT AGGCTAGAAG TGCTTTATGC TCTTTTTT

-5883 CTTTATGTTC AAATTCATAT ACTTTTAGAT CATTCCTTAA AGAAGAATCT ATCCCCCT

-5823 GTAAATGTTA TCACTGACTG GATAGTGTTG GTGTCTCACT CCCAACCCCT GTGTGGTG

-5763 AGTGCCCTGC TTCCCCAGCC CTGGGCCCTC TCTGATTCCT GAGAGCTTTG GGTGCTCC

-5703 CATTAGGAGG AAGAGAGGAA GGGTGTTTTT AATATTCTCA CCATTCACCC ATCCACCT

-5643 TAGACACTGG GAAGAATCAG TTGCCCACTC TTGGATTTGA TCCTCGAATT AATGACCT

-5583 ATTTCTGTCC CTTGTCCATT TCAACAATGT GACAGGCCTA AGAGGTGCCT TCTCCATG

-5523 ATTTTTGAGG AGAAGGTTCT CAAGATAAGT TTTCTCACAC CTCTTTGAAT TACCTCCA

-5463 TGTGTCCCCA TCACCATTAC CAGCAGCATT TGGACCCTTT TTCTGTTAGT CAGATGCT

-5403 CCACCTCTTG AGGGTGTATA CTGTATGCTC TCTACACAGG AATATGCAGA GGAAATAG

-5343 AAAGGGAAAT CGCATTACTA TTCAGAGAGA AGAAGACCTT TATGTGAATG AATGAGAG

-5283 TAAAATCCTA AGAGAGCCCA TATAAAATTA TTACCAGTGC TAAAACTACA AAAGTTAC

-5223 TAACAGTAAA CTAGAATAAT AAAACATGCA TCACAGTTGC TGGTAAAGCT AAATCAGA

-5163 TTTTTTTCTT AGAAAAAGCA TTCCATGTGT GTTGCAGTGA TGACAGGAGT GCCCTTCA

-5103 CAATATGCTG CCTGTAATTT TTGTTCCCTG GCAGAATGTA TTGTCTTTTC TCCCTTTA

-5043 TCTTAAATGC AAAACTAAAG GCAGCTCCTG GGCCCCCTCC CCAAAGTCAG CTGCCTGC

-4983 CCAGCCCCAC GAAGAGCAGA GGCCTGAGCT TCCCTGGTCA AAATAGGGGG CTAGGGAG

-4923 TAACCTTGCT CGATAAAGCT GTGTTCCCAG AATGTCGCTC CTGTTCCCAG GGGCACCA

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Figure 2 (7 of 11)

-4863 CTGGAGGGTG GTGAGCCTCA CTGGTGGCCT GATGCTTACC TTGTGCCCTC ACACCAGT

-4803 TCACTGGAAC CTTGAACACT TGGCTGTCGC CCGGATCTGC AGATGTCAAG AACTTCTG

-4743 AGTCAAATTA CTGCCCACTT CTCCAGGGCA GATACCTGTG AACATCCAAA ACCATGCC

-4683 AGAACCCTGC CTGGGGTCTA CAACACATAT GGACTGTGAG CACCAAGTCC AGCCCTGA

-4623 CTGTGACCAC CTGCCAAGAT GCCCCTAACT GGGATCCACC AATCACTGCA CATGGCAG

-4563 AGCGAGGCTT GGAGGTGCTT CGCCACAAGG CAGCCCCAAT TTGCTGGGAG TTTCTTGG

-4503 CCTGGTAGTG GTGAGGAGCC TTGGGACCCT CAGGATTACT CCCCTTAAGC ATAGTGGG

-4443 CCCTTCTGCA TCCCCAGCAG GTGCCCCGCT CTTCAGAGCC TCTCTCTCTG AGGTTTAC

-4383 AGACCCCTGC ACCAATGAGA CCATGCTGAA GCCTCAGAGA GAGAGATGGA GCTTTGAC

-4323 GGAGCCGCTC TTCCTTGAGG GCCAGGGCAG GGAAAGCAGG AGGCAGCACC AGGAGTGG

-4263 ACACCAGTGT CTAAGCCCCT GATGAGAACA GGGTGGTCTC TCCCATATGC CCATACCA

-4203 CCTGTGAACA GAATCCTCCT TCTGCAGTGA CAATGTCTGA GAGGACGACA TGTTTCCC

-4143 CCTAACGTGC AGCCATGCCC ATCTACCCAC TGCCTACTGC AGGACAGCAC CAACCCAG

-4083 GCTGGGAAGC TGGGAGAAGA CATGGAATAC CCATGGCTTC TCACCTTCCT CCAGTCCA

-4023 GGGCACCATT TATGCCTAGG ACACCCACCT GCCGGCCCCA GGCTCTTAAG AGTTAGGT

-3963 CCTAGGTGCC TCTGGGAGGC CGAGGCAGGA GAATTGCTTG AACCCGGGAG GCAGAGGT

-3903 CAGTGAGCCG AGATCACACC ACTGCACTCC AGCCTGGGTG ACAGAATGAG ACTCTGTC

-3843 AAAAAAAAAG AGAAAGATAG CATCAGTGGC TACCAAGGGC TAGGGGCAGG GGAAGGTG

-3783 GAGTTAATGA TTAATAGTAT GAAGTTTCTA TGTGAGATGA TGAAAATGTT CTGGAAAA

-3723 AAATATAGTG GTGAGGATGT AGAATATTGT GAATATAATT AACGGCATTT AATTGTAC

-3663 TTAACATGAT TAATGTGGCA TATTTTATCT TATGTATTTG ACTACATCCA AGAAACAC

-3603 GGAGAGGGAA AGCCCACCAT GTAAAATACA CCCACCCTAA TCAGATAGTC CTCATTGT

-3543 CCAGGTACAG GCCCCTCATG ACCTGCACAG GAATAACTAA GGATTTAAGG ACATGAGG

Replacement Sheet

Figure 2 (8 of 11)

-3483 TCCCAGCCAA CTGCAGGTGC ACAACATAAA TGTATCTGCA AACAGACTGA GAGTAAAG

-3423 GGGGGCACAA ACCTCAGCAC TGCCAGGACA CACACCCTTC TCGTGGATTC TGACTTTA

-3363 TGACCCGGCC CACTGTCCAG ATCTTGTTGT GGGATTGGGA CAAGGGAGGT CATAAAGC

-3303 GTCCCCAGGG CACTCTGTGT GAGCACACGA GACCTCCCCA CCCCCCCACC GTTAGGTC

-3243 CACACATAGA TCTGACCATT AGGCATTGTG AGGAGGACTC TAGCGCGGGC TCAGGGAT

-3183 CACCAGAGAA TCAGGTACAG AGAGGAAGAC GGGGCTCGAG GAGCTGATGG ATGACACA

-3123 GCAGGGTTCC TGCAGTCCAC AGGTCCAGCT CACCCTGGTG TAGGTGCCCC ATCCCCCT

-3063 TCCAGGCATC CCTGACACAG CTCCCTCCCG GAGCCTCCTC CCAGGTGACA CATCAGGG

-3003 CCTCACTCAA GCTGTCCAGA GAGGGCAGCA CCTTGGACAG CGCCCACCCC ACTTCACT

-2943 TCCTCCCTCA CAGGGCTCAG GGCTCAGGGC TCAAGTCTCA GAACAAATGG CAGAGGCC

-2883 TGAGCCCAGA GATGGTGACA GGGCAATGAT CCAGGGGCAG CTGCCTGAAA CGGGAGCA

-2823 TGAAGCCACA GATGGGAGAA GATGGTTCAG GAAGAAAAAT CCAGGAATGG GCAGGAGA

-2763 AGAGGAGGAC ACAGGCTCTG TGGGGCTGCA GCCCAGGATG GGACTAAGTG TGAAGACA

-2703 TCAGCAGGTG AGGCCAGGTC CCATGAACAG AGAAGCAGCT CCCACCTCCC CTGATGCA

-2643 GACACACAGA GTGTGTGGTG CTGTGCCCCC AGAGTCGGGC TCTCCTGTTC TGGTCCCC

-2583 GGAGTGAGAA GTGAGGTTGA CTTGTCCCTG CTCCTCTCTG CTACCCCAAC ATTCACCT

-2523 TCCTCATGCC CCTCTCTCTC AAATATGATT TGGATCTATG TCCCCGCCCA AATCTCAT

-2463 CAAATTGTAA ACCCCAATGT TGGAGGTGGG GCCTTGTGAG AAGTGATTGG ATAATGCG

-2403 TGGATTTTCT GCTTTGATGC TGTTTCTGTG ATAGAGATCT CACATGATCT GGTTGTTT

-2343 AAGTGTGTAG CACCTCTCCC CTCTCTCTCT CTCTCTCTTA CTCATGCTCT GCCATGTA

-2283 ACGTTCCTGT TTCCCCTTCA CCGTCCAGAA TGATTGTAAG TTTTCTGAGG CCTCCCCA

-2223 AGCAGAAGCC ACTATGCTTC CTGTACAACT GCAGAATGAT GAGCGAATTA AACCTCTT

-2163 CTTTATAAAT TACCCAGTCT CAGGTATTTC TTTATAGCAA TGCGAGGACA GACTAATA

Figure 2 (9 of 11)

-2103 ATCTTCTACT CCCAGATCCC CGCACACGCT TAGCCCCAGA CATCACTGCC CCTGGGAG

-2043 TGCACAGCGC AGCCTCCTGC CGACAAAAGC AAAGTCACAA AAGGTGACAA AAATCTGC

-1983 TTGGGGACAT CTGATTGTGA AAGAGGGAGG ACAGTACACT TGTAGCCACA GAGACTGG

-1923 CTCACCGAGC TGAAACCTGG TAGCACTTTG GCATAACATG TGCATGACCC GTGTTCAA

-1863 TCTAGAGATC AGTGTTGAGT AAAACAGCCT GGTCTGGGGC CGCTGCTGTC CCCACTTC

-1803 TCCTGTCCAC CAGAGGGCGG CAGAGTTCCT CCCACCCTGG AGCCTCCCCA GGGGCTGC

-1743 ACCTCCCTCA GCCGGGCCCA CAGCCCAGCA GGGTCCACCC TCACCCGGGT CACCTCGG

-1683 CACGTCCTCC TCGCCCTCCG AGCTCCTCAC ACGGACTCTG TCAGCTCCTC CCTGCAGC

-1623 ATCGGCCGCC CACCTGAGGC TTGTCGGCCG CCCACTTGAG GCCTGTCGGC TGCCCTCT

-1563 AGGCAGCTCC TGTCCCCTAC ACCCCCTCCT TCCCCGGGCT CAGCTGAAAG GGCGTCTC

-1503 AGGGCAGCTC CCTGTGATCT CCAGGACAGC TCAGTCTCTC ACAGGCTCCG ACGCCCCC

-1443 TGCTGTCACC TCACAGCCCT GTCATTACCA TTAACTCCTC AGTCCCATGA AGTTCACT

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-1263 TAAATGTGTG GGAGATCTCT AAAAAGAAGC ATATCACCTC CGTGTGGCCC CCAGCAGT

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-1143 CCCGCGGCTG CCCCAGGAAT GAGGCCTCAA CCCCCAGAGC TTCAGAAGGG AGGACAGA

-1083 CCTGCAGGGA ATAGATCCTC CGGCCTGACC CTGCAGCCTA ATCCAGAGTT CAGGGTCA

-1023 TCACACCACG TCGACCCTGG TCAGCATCCC TAGGGCAGTT CCAGACAAGG CCGGAGGT

-963 CCTCTTGCCC TCCAGGGGGT GACATTGCAC ACAGACATCA CTCAGGAAAC GGATTCCC

-903 GGACAGGAAC CTGGCTTTGC TAAGGAAGTG GAGGTGGAGC CTGGTTTCCA TCCCTTGC

-843 CAACAGACCC TTCTGATCTC TCCCACATAC CTGCTCTGTT CCTTTCTGGG TCCTATGA

-783 ACCCTGTTCT GCCAGGGGTC CCTGTGCAAC TCCAGACTCC CTCCTGGTAC CACCATGG

Figure 2 (10 of 11)

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-723  AAGGTGGGGT GATCACAGGA CAGTCAGCCT CGCAGAGACA GAGACCACCC AGGACTGT
-663  GGGAGAACAT GGACAGGCCC TGAGCCGCAG CTCAGCCAAC AGACACGGAG AGGGAGGG
-603  CCCCTGGAGC CTTCCCCAAG GACAGCAGAG CCCAGAGTCA CCCACCTCCC TCCACCAC
-543  TCCTCTCTTT CCAGGACACA CAAGACACCT CCCCCTCCAC ATGCAGGATC TGGGGACT
-483  TGAGACCTCT GGGCCTGGGT CTCCATCCCT GGGTCAGTGG CGGGGTTGGT GGTACTGG
-423  ACAGAGGGCT GGTCCCTCCC CAGCCACCAC CCAGTGAGCC TTTTTCTAGC CCCCAGAG
-363  ACCTCTGTCA CCTTCCTGTT GGGCATCATC CCACCTTCCC AGAGCCCTGG AGAGCATG
-303  GAGACCCGGG ACCCTGCTGG GTTTCTCTGT CACAAAGGAA AATAATCCCC CTGGTGTG
-243  AGACCCAAGG ACAGAACACA GCAGAGGTCA GCACTGGGGA AGACAGGTTG TCCTCCCA
-183  GGATGGGGGT CCATCCACCT TGCCGAAAAG ATTTGTCTGA GGAACTGAAA ATAGAAGG
-123  AAAAAGAGGA GGGACAAAAG AGGCAGAAAT GAGAGGGGAG GGGACAGAGG ACACCTGA
 -63  AAAGACCACA CCCATGACCC ACGTGATGCT GAGAAGTACT CCTGCCCTAG GAAGAGAC
  -3  AGGGCAGAGG GAGGAAGGAC AGCAGACCAG ACAGTCACAG CAGCCTTGAC AAAACGTT
  57  TGGAACTCAA GCTCTTCTCC ACAGAGGAGG ACAGAGCAGA CAGCAGAGAC CATGGAGT
 117  CCCTCGGCCC CTCCCCACAG ATGGTGCATC CCCTGGCAGA GGCTCCTGCT CACAGGTG
 177  GGGAGGACAA CCTGGGAGAG GGTGGGAGGA GGGAGCTGGG GTCTCCTGGG TAGGACAG
 237  CTGTGAGACG GACAGAGGGC TCCTGTTGGA GCCTGAATAG GGAAGAGGAC ATCAGAGA
 297  GACAGGAGTC ACACCAGAAA AATCAAATTG AACTGGAATT GGAAAGGGGC AGGAAAAC
 357  CAAGAGTTCT ATTTTCCTAG TTAATTGTCA CTGGCCACTA CGTTTTTAAA AATCATAA
 417  ACTGCATCAG ATGACACTTT AAATAAAAAC ATAACCAGGG CATGAAACAC TGTCCTCA
 477  CGCCTACCGC GGACATTGGA AAATAAGCCC CAGGCTGTGG AGGGCCCTGG GAACCCTC
 537  GAACTCATCC ACAGGAATCT GCAGCCTGTC CCAGGCACTG GGGTGCAACC AAGATC
```

Figure 2 (11 of 11)

Figure 3

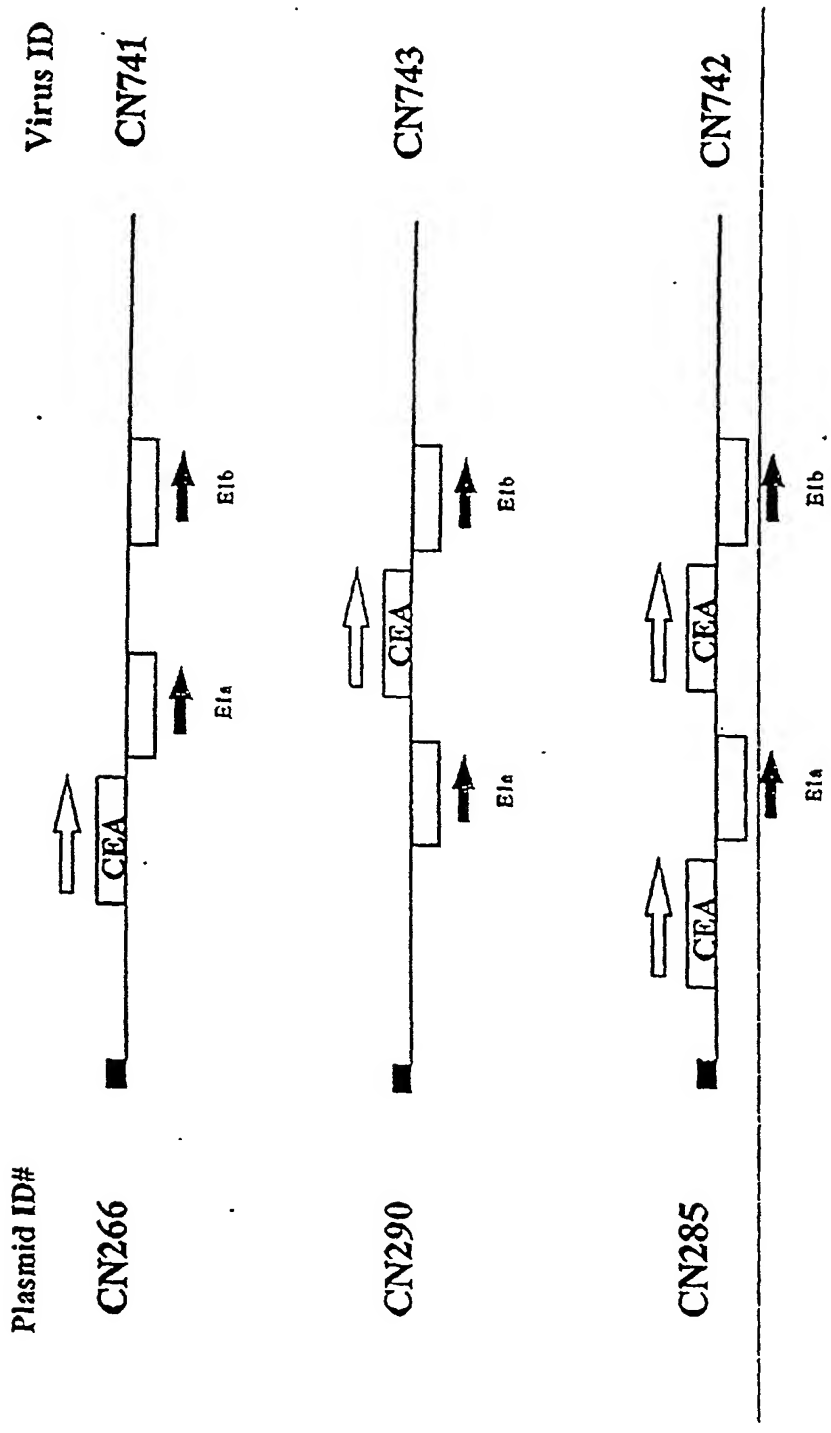

CEA E1a and E1b Adenovirus Constructs
Plasmid ID#
Virus ID
CN266
CN741
CN290
CN743
CN285
CN742
CEA
E1a
E1b

Figure 4

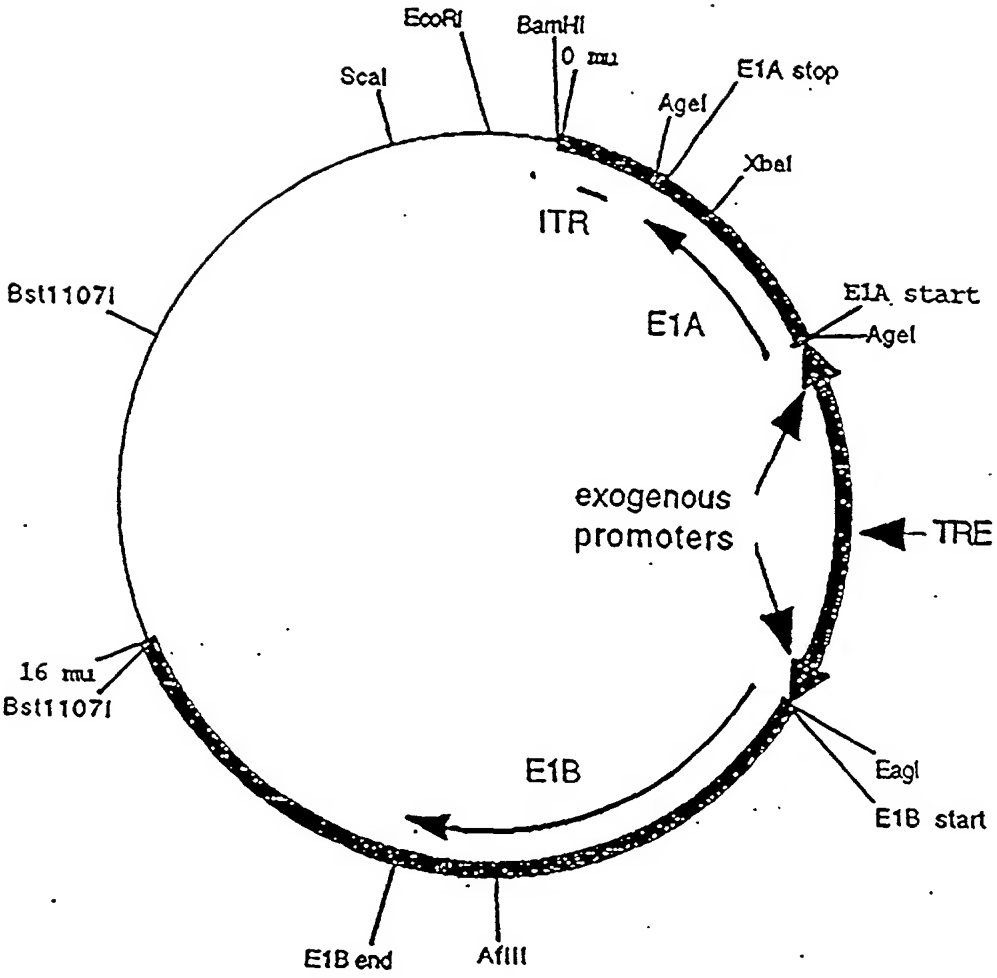

EcoRI
BamHI
0 mu
ScaI
E1A stop
AgeI
XbaI
ITR
E1A start
AgeI
E1A
Bst1107I
exogenous
promoters
TRE
16 mu
Bst1107I
E1B
EagI
E1B start
E1B end
AflII

Figure 5A

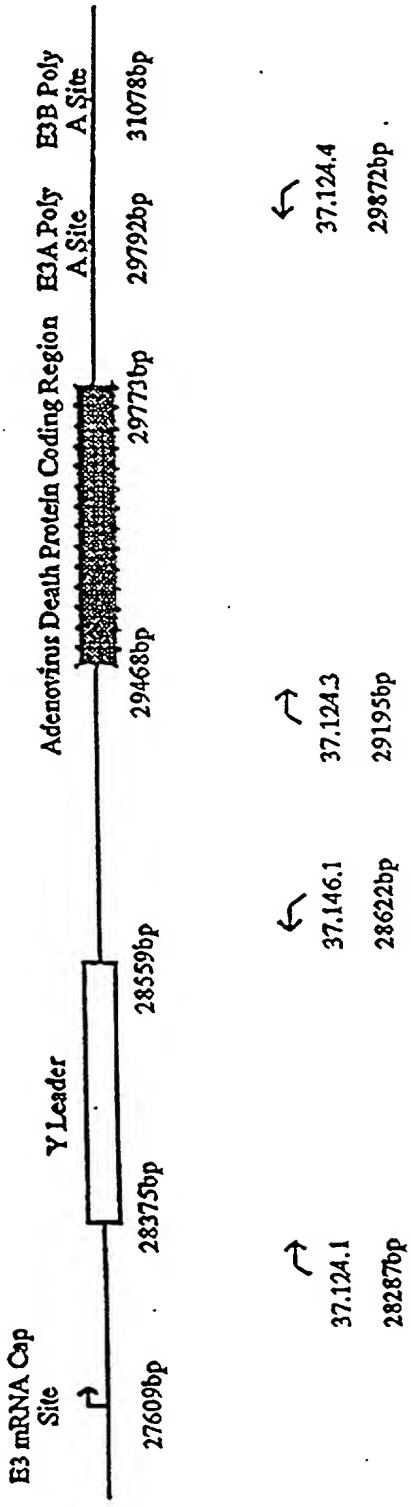


Figure 5B

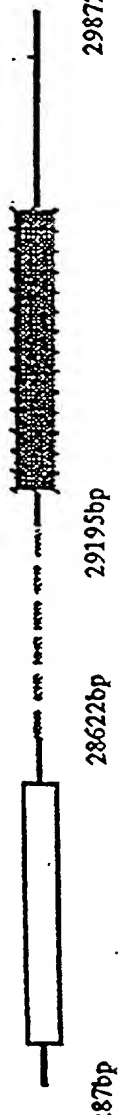


Figure 6

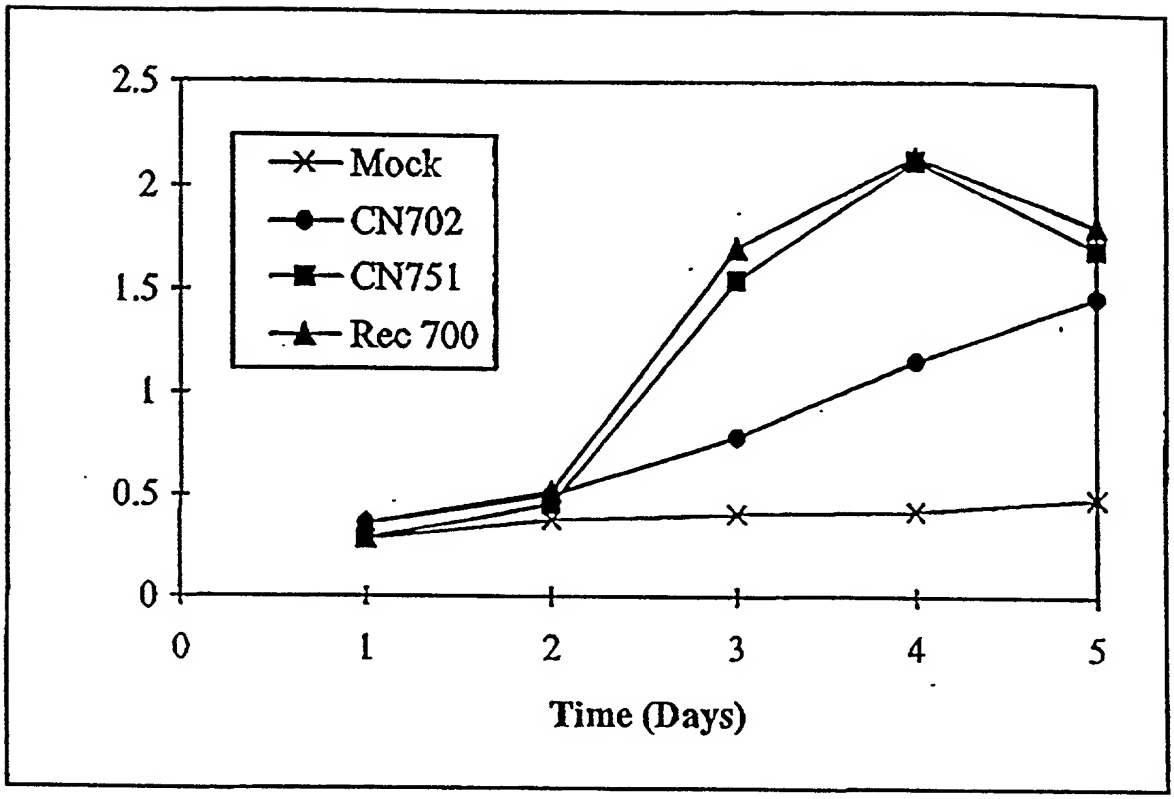


Figure 7

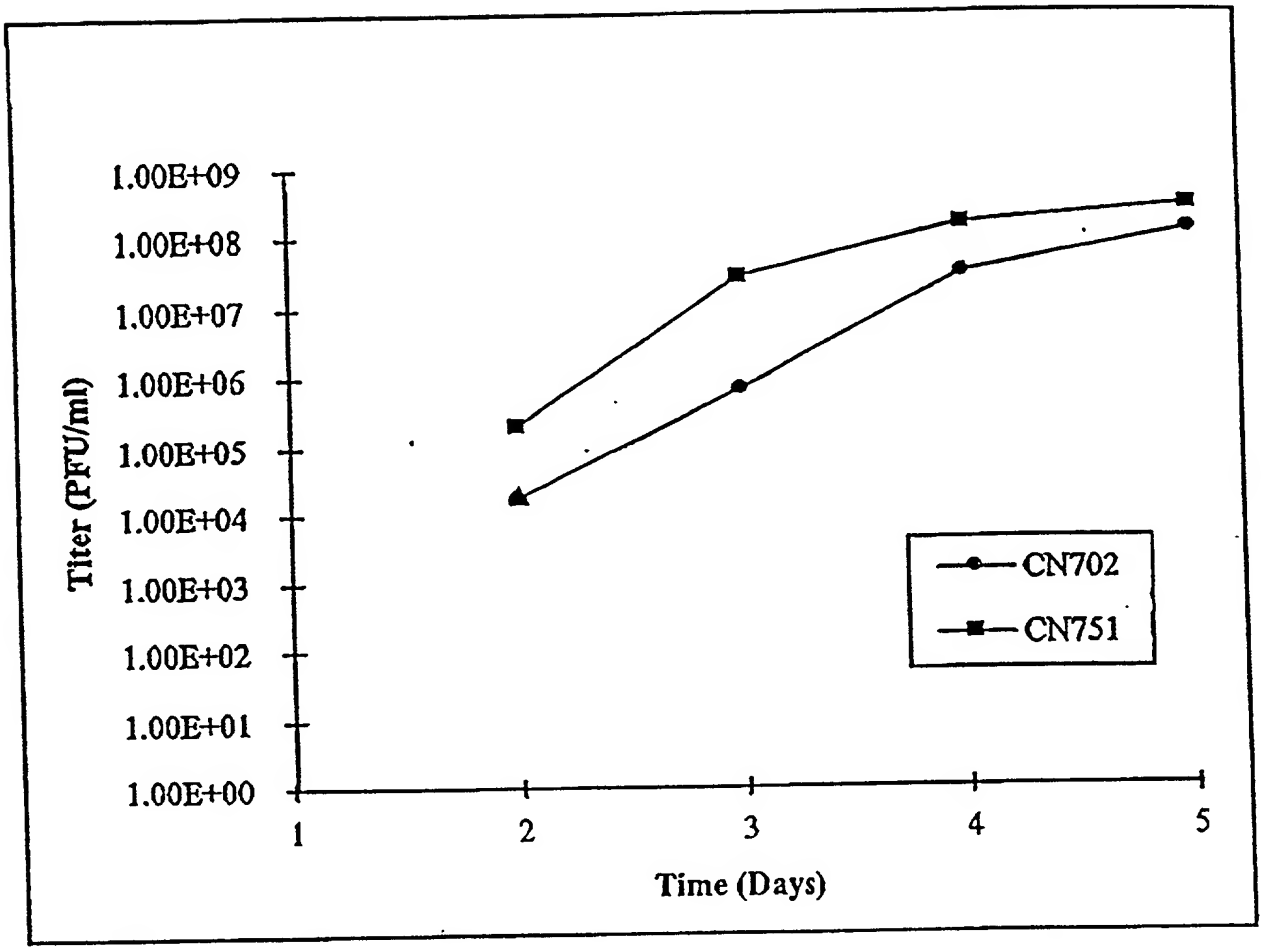
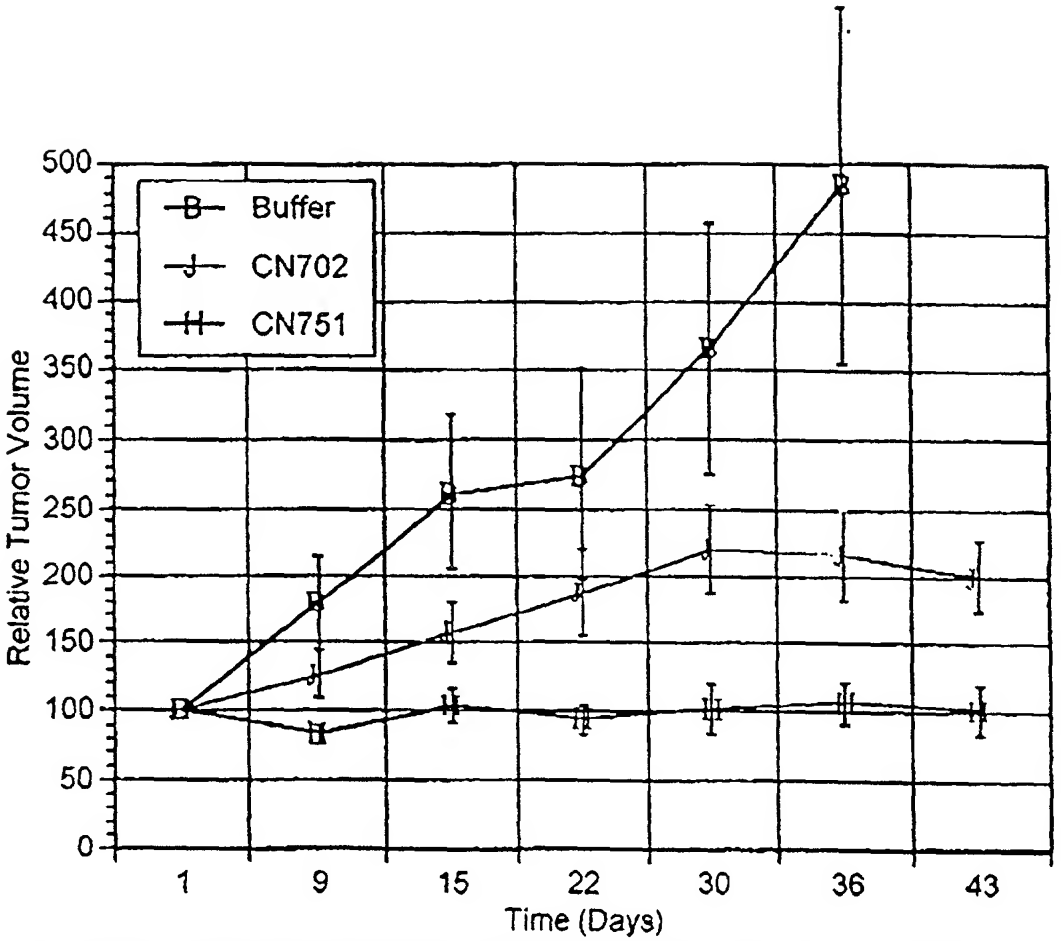

1.00E+09
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Titer (PFU/ml)
1
2
3
4
5
Time (Days)
CN702
CN751

Figure 8



Note: Buffer treated animals were sacrificed after four weeks because of excessive tumor burden